

STATE OF MARYLAND

DHMH

Maryland Department of Health and Mental Hygiene

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October 02, 2009

Public Health & Emergency Preparedness Bulletin: # 2009:38 Reporting for the week ending 09/26/09 (MMWR Week #38)

CURRENT HOMELAND SECURITY THREAT LEVELS

National: Yellow (ELEVATED) *The threat level in the airline sector is Orange (HIGH)

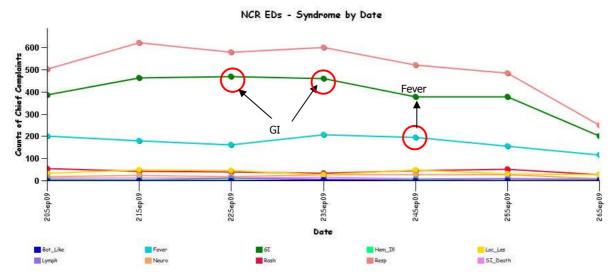
Maryland: Yellow (ELEVATED)

SYNDROMIC SURVEILLANCE REPORTS

ESSENCE (Electronic Surveillance System for the Early Notification of Community-based Epidemics):

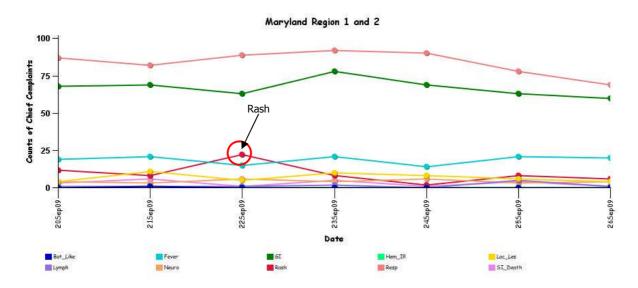
Graphical representation is provided for all syndromes, excluding the "Other" category, all age groups, and red alerts are circled. Note: ESSENCE – ANCR Spring 2006 (v 1.3) now uses syndrome categories consistent with CDC definitions.

Overall, no suspicious patterns of illness were identified. Track backs to the health care facilities yielded no suspicious patterns of illness.

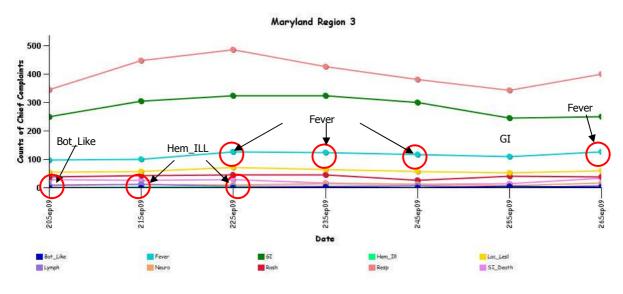


^{*} Includes EDs in all jurisdictions in the NCR (MD, VA, and DC) reporting to ESSENCE

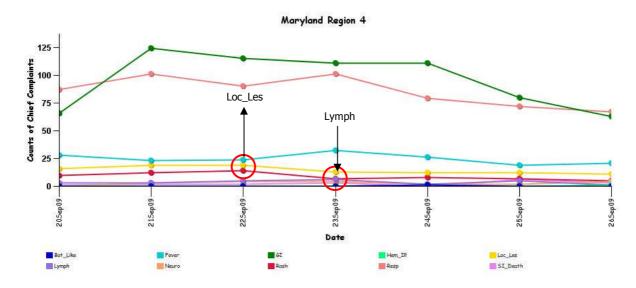
MARYLAND ESSENCE:



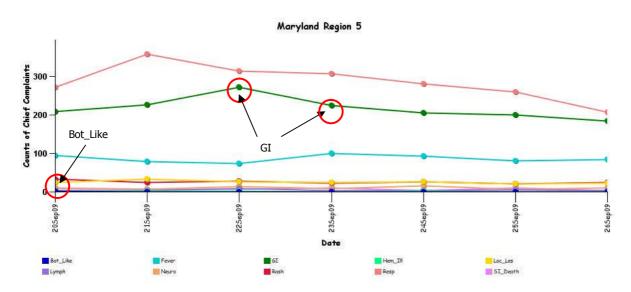
^{*} Region 1 and 2 includes EDs in Allegany, Frederick, Garrett, and Washington counties reporting to ESSENCE



^{*} Region 3 includes EDs in Anne Arundel, Baltimore city, Baltimore, Carroll, Harford, and Howard counties reporting to ESSENCE



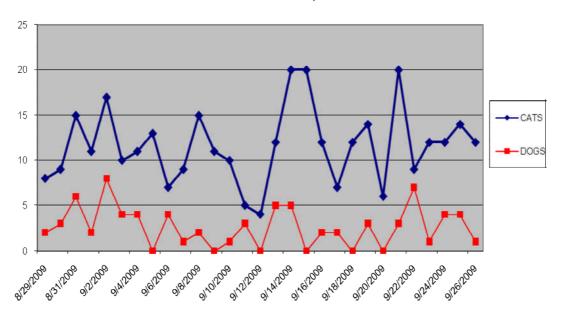
* Region 4 includes EDs in Cecil, Dorchester, Kent, Somerset, Talbot, Wicomico, and Worcester counties reporting to ESSENCE



^{*} Region 5 includes EDs in Calvert, Charles, Montgomery, Prince George's, and St. Mary's counties reporting to ESSENCE

BALTIMORE CITY SYNDROMIC SURVEILLANCE PROJECT: No suspicious patterns in the medic calls, ED Syndromic Surveillance and the animal carcass surveillance. Graphical representation is provided for animal carcass surveillance 311 data.

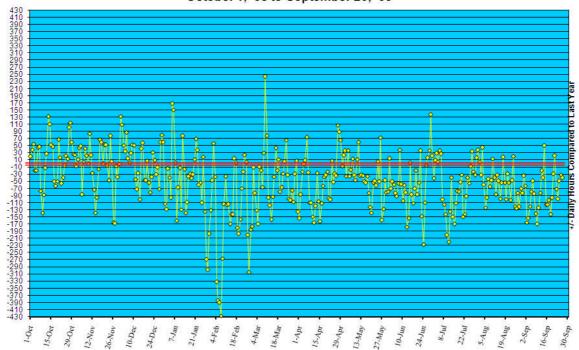
Dead Animal Pick-Up Calls to 311



REVIEW OF EMERGENCY DEPARTMENT UTILIZATION

YELLOW ALERT TIMES (ED DIVERSION): The reporting period begins 10/01/08.

Statewide Yellow Alert Comparison Daily Historical Deviations October 1, '08 to September 26, '09



REVIEW OF MORTALITY REPORTS

Office of the Chief Medical Examiner: OCME reports no suspicious deaths related to BT for the week.

MARYLAND TOXIDROMIC SURVEILLANCE

Poison Control Surveillance Monthly Update: Investigations of the outliers and alerts observed by the Maryland Poison Center and National Capital Poison Center in August 2009 did not identify any cases of possible terrorism events.

REVIEW OF MARYLAND DISEASE SURVEILLANCE FINDINGS

COMMUNICABLE DISEASE SURVEILLANCE CASE REPORTS (confirmed, probable and suspect):

Meningitis:	<u>Aseptic</u>	<u>Meningococcal</u>
New cases (Sep 20- Sep 26, 2009):	21	0
Prior week (Sep 13- Sep 19, 2009):	15	0
Week#38, 2008 (Sep 14- Sep 20, 2008):	12	0

OUTBREAKS: 7 outbreaks were reported to DHMH during MMWR Week 38 (September 20- 26, 2009)

2 Gastroenteritis outbreaks

- 1 outbreak of GASTROENTERITIS associated with a Nursing Home
- 1 outbreak of GASTROENTERITIS associated with a Daycare Center

5 Respiratory illness outbreaks

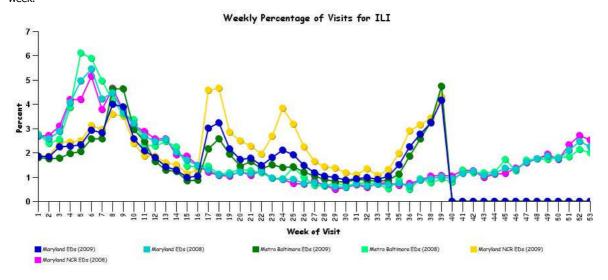
5 outbreaks of ILI associated with Schools

MARYLAND INFLUENZA STATUS: Influenza activity in Maryland for Week 38 is WIDESPREAD.

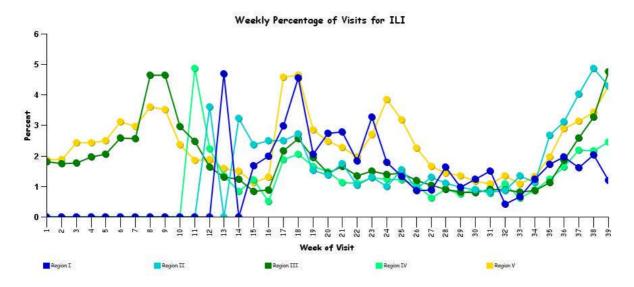
SYNDROMIC SURVEILLANCE FOR INFLUENZA-LIKE ILLNESS

Graphs show the percentage of total weekly Emergency Department patient chief complaints that have one or more ICD9 codes representing provider diagnoses of influenza-like illness. These graphs do not represent confirmed influenza.

Graphs show proportion of total weekly cases seen in a particular syndrome/subsyndrome over the total number of cases seen. Weeks run Sunday through Saturday and the last week shown may be artificially high or low depending on how much data is available for the week.



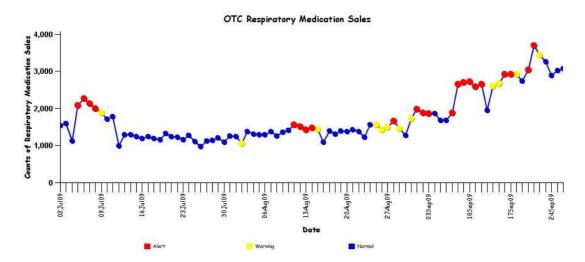
^{*} Includes 2008 and 2009 Maryland ED visits for ILI in Metro Baltimore (Region 3), Maryland NCR (Region 5), and Maryland Total



*Includes 2009 Maryland ED visits for ILI in Region 1, 2, 3, 4, and 5 2009 data for these regions are depicted separately to establish baselines, due to the addition of new hospitals in these regions.

OVER-THE-COUNTER (OTC) SALES FOR RESPIRATORY MEDICATIONS:

Graph shows the daily number of over-the-counter respiratory medication sales in Maryland at a large pharmacy chain.



PANDEMIC INFLUENZA UPDATE:

WHO Pandemic Influenza Phase: Phase 6: Characterized by community level outbreaks in at least one other country in a different WHO region in addition to the criteria defined in Phase 5. Designation of this phase will indicate that a global pandemic is under way. Definition of Phase 5 is characterized by human-to-human spread of the virus into at least two countries in one WHO region. While most countries will not be affected at this stage, the declaration of Phase 5 is a strong signal that a pandemic is imminent and that the time to finalize the organization, communication, and implementation of the planned mitigation measures is short.

US Pandemic Influenza Stage: Stage 0: New domestic animal outbreak in at-risk country

**More information regarding WHO Pandemic Influenza Phase and US Pandemic Influenza Stage can be found at: http://preparedness.dhmh.maryland.gov/Docs/PandemicInfluenza/PandemicInfluenzaResponseAnnex(Version7.2).pdf

AVIAN INFLUENZA-RELATED REPORTS:

WHO update: As of September 24, 2099, the WHO-confirmed global total of human cases of H5N1 avian influenza virus infection stands at 442, of which 262 have been fatal. Thus, the case fatality rate for human H5N1 is about 60%.

AVIAN INFLUENZA, HUMAN (EGYPT): 23 Sep 2009, The Ministry of Health of Egypt has reported 2 new confirmed human cases of avian influenza A(H5N1). The 1st case is a 13-year-old male from Alexandria Governorate. His symptoms started on 13 Sep 2009. He was admitted to hospital on 14 Sep 2009, where he received oseltamivir treatment. The patient is in a stable condition. The 2nd case is a 14-month-old female from Tahrer District, Behira Governorate. Her symptoms started on 23 Sep 2009. She was admitted to Damanhur Fever Hospital, where she received oseltamivir treatment. The patient is in a stable condition. Investigations into the source of infection indicated that both cases had close contact with dead and/or sick poultry. The cases were confirmed by the Egyptian Central Public Health Laboratories. Of the 87 cases confirmed to date in Egypt, 27 have been fatal.

H1N1 INFLUENZA (Swine Flu):

INFLUENZA PANDEMIC (H1N1) CASE COUNTS: 25 Sep 2009, As of [20 Sep 2009], there have been more than 300 000 laboratory confirmed cases of pandemic influenza H1N1, 3917 deaths, in 191 countries and territories reported to the World Health Organization (WHO). As more and more countries have stopped counting individual cases, particularly of milder illness, the case count is significantly lower than the actually number of cases that have occurred. While the case counts no longer reflect actual disease activity, the WHO is actively monitoring the progress of the pandemic through frequent consultations with the WHO Regional Offices and member states and through monitoring of multiple sources of data. In the temperate regions of the northern hemisphere, influenza-like-illness (ILI) activity continues to increase in many areas. In North America, the United States has reported continued increases in activity above the seasonal baseline for the last 2 to 3 weeks, primarily in the southeast but now also appearing in the upper midwest and the northeast. In Europe and Central and Western Asia, the United Kingdom is reporting regional increases in ILI activity in Northern Ireland; and Scotland and the Netherlands, France, Ireland, and Israel are reporting rates above the seasonal baseline. In Japan, influenza activity continues to be slightly above the seasonal epidemic threshold. The increases in ILI activity have been accompanied by increases in laboratory isolations of pandemic influenza H1N1 2009 in most of these areas. In the tropical regions of the Americas and Asia, influenza activity remains variable. In parts of India, Bangladesh and Cambodia, influenza transmission continues to be active, while other countries in the Southeast Asia have been recently reporting declining transmission (Indonesia, Singapore and Thailand). Although most countries in the tropical regions of the Americas are still reporting regional to widespread geographic spread of influenza activity, there is no consistent pattern in the trend of respiratory diseases. Peru and Mexico have reported an increasing trend in some areas, while most others are reporting an unchanged or decreasing trend (most notably Bolivia, Venezuela and Brazil). In the temperate regions of the southern hemisphere, influenza transmission has largely returned to baseline (Chile, Argentina, and New Zealand) or is continuing to decline (Australia and South Africa). All pandemic H1N1 2009 influenza viruses analyzed to date have been antigenically and genetically similar to A/California/7/2009-like pandemic H1N1 2009 virus.

INFLUENZA PANDEMIC (H1N1) VACCINE AVAILABILITY: 21 Sep 2009, The 1st wave of H1N1 [i.e. Influenza pandemic (H1N1) 2009 virus] vaccine will probably consist of 3.4 million doses of MedImmune's nasal-spray product and is likely to reach providers the 1st week in October 2009, federal health officials said today. At the same time, officials said the pandemic virus is now circulating widely in 21 states, 10 more than a week ago, and the number of patients going to clinics and hospitals with flu-like illness is about twice what is normal for this time of year. Health and Human Services Secretary Kathleen Sebelius said on 13 Sep 2009 that the 1st doses of vaccine could become available the 1st week in October 2009, but today marked the 1st time officials gave a specific number. Previously, the general expectation was that the 1st doses wouldn't be available until mid October 2009. "We actually anticipate being able to start receiving orders for the vaccine by early October 2009, and actually vaccine going out and being distributed by providers by the 1st week of October 2009," Dr. Jay Butler, head of the Centers for Disease Control and Prevention (CDC) H1N1 Vaccine Task Force, said at a news briefing today [18 Sep 2009]. "Initially, we anticipate that about 3.4 million doses of vaccine will be available," he said. "Additional doses may be available as well, but 3.4 million is the hard number we have now. All of that is the nasal spray vaccine." The live attenuated vaccine from MedImmune is indicated for children and adults aged 2 through 49, under the approval granted by the Food and Drug Administration (FDA) on 15 Sep 2009. The vaccine will be allocated to states in proportion to population. Under a centralized distribution system set up by the CDC, vaccination providers

request doses from their state health department. He said some states have identified maternity hospitals where they may want to send the 1st doses of vaccine, though that would require an injectable rather than the nasal-spray vaccine. States may also try to steer early doses to healthcare workers and to people who will be living with babies under 6 months old, he said. Vaccine will be shipped from 4 sites around the country to facilitate rapid distribution, Butler said, but added that he didn't know the locations. The distribution system is an expanded version of what the CDC uses for its Vaccines for Children program, which involves about 40 000 providers. The agency expects about 90 000 sites to participate in the campaign. Not all of those 90 000 will be individual vaccination providers, Butler said today [18 Sep 2009]. Some may be retail chains that may redistribute vaccine to their outlets. Regarding vaccine dosage, the expectation is that children under age 10 will need 2 doses, while one dose will suffice for older children and adults, Butler noted today [18 Sep 2009]. (The age recommendations differ slightly among the 3 vaccines the FDA has approved for use in children. For MedImmune, the indication is 2 doses for children 2 through 9 years old; for Novartis, it is 2 doses for ages 4 through 8, and for Sanofi Pasteur, 2 doses for ages 6 months through 8 years.) The CDC has been predicting that about 45 million to 50 million doses of vaccine will become available in mid October 2009, followed by about 20 million a week after that, reaching a total of 195 million in December 2009. Butler reaffirmed that forecast today [18 Sep 2009]. At today's briefing, Dr. Dan Jernigan, deputy director of the CDC Influenza Division, emphasized that the extent of flu activity is very unusual for this time of year, with some flu in every state and widespread cases in 21 states. From monitoring at outpatient clinics and emergency rooms around the country, "What we're finding is there is an increased amount of folks coming into clinics with influenza; it's about twice at least what we would expect at this time of year," he said. "We expect to see a whole lot more illness in coming weeks and throughout the flu season," Jernigan said. As for hospital cases, he said, "What we see so far is there is some increase in the rate of hospitalization for children and young adults, but it's not up at the same levels we see during seasonal influenzas." Jernigan cited "considerable" flu activity in the Southeast, where schools opened earlier than elsewhere, but did not mention any other regional hot spots. The vast majority of viruses in circulation are the novel H1N1 [pandemic (H1N1) 2009 virus], and they remain well matched to the vaccine that's on its way, he said. In response to a question, Butler said people who have had a recent flu-like illness should still get the H1N1 vaccine if they are in a target group unless they had a confirmed case of H1N1. "People who have actually been infected with the 2009 H1N1 virus likely do have some immunity," he said. But most cases were not lab-confirmed, and other flu strains, as well as other respiratory viruses, have circulated during the epidemic, he noted. In other developments, the World Health Organization (WHO) in its weekly update reported varying levels of H1N1 activity across the globe. The United States is seeing increased flu activity, most notably in the South, Southeast, and Northeast, whereas activity remains low in Canada, the WHO said. Europe and Central Asia also have low activity overall, but France is seeing increases, and localized activity is reported in several European countries and Israel. Flu activity in Japan is holding above the seasonal epidemic threshold, the WHO said. Meanwhile, much of South and Southeast Asia has regional or widespread outbreaks, with cases increasing particularly in India and Bangladesh. Regional to widespread activity also continues to be the story in tropical parts of Central and South America. In temperate parts of the Southern Hemisphere, flu continues to wane or has sunk to the seasonal baseline in most countries, the WHO said.

Resources:

http://www.cdc.gov/h1n1flu/

http://www.dhmh.maryland.gov/swineflu/

NATIONAL DISEASE REPORTS

EASTERN EQUINE ENCEPHALITIS, EQUINE (MASSACHUSETTS, MAINE): 26 Sep 2009, Massachusetts health officials say the mosquito-borne disease Eastern equine encephalitis (EEE) has been detected in a horse in the state for the 1st time this year, increasing the risk that it will spread to humans. The state Public Health Department announced Thursday [24 Sep 2009] that the 1-year-old horse from Peabody fell ill on 18 Sep 2009 and died the next day. State epidemiologist Dr. Alfred DeMaria says the fact a horse fell ill with EEE means that humans are at increased risk. (Viral encephalitis is listed in Category B on the CDC list of Critical Biological Agents) *Non-suspect case

PLAGUE, FATAL (ILLINOIS) 21 Sep 2009, Investigators have found a strain of the plague bacteria _Yersinia pestis_ in the body of a University of Chicago geneticist who died last week [13 Sep 2009] within 12 hours of his arrival at Bernard Mitchell Hospital with "intense flu-like symptoms." The autopsy did not identify a cause of death, according to the Chicago Tribune. No other cases have been reported in Chicago, and none of the other researchers exposed to the strain, used as a vaccine since the 1960s, has fallen ill, but officials gave antibiotics to his family, friends, and co-workers. Ken Alexander, head of pediatric infectious disease said that the autopsy did not imply that the strain of the plague was a public health threat. He told the Chicago Tribune that "the more likely possibility, I'd say 999 to 1, is that there was something unusual about him." (Plague is listed in Category A on the CDC list of Critical Biological Agents) *Non-suspect case

BRUCELLOSIS, SWINE HUNTERS (TEXAS): 20 Sep 2009, A 76-year-old man from Tomball developed symptoms that turned out to have nothing to do with swine flu but everything to do with hogs. Doctors earlier in 2009 diagnosed him with brucellosis. The man picked up the disease from feral hogs that have rooted through parts of his property in Cherokee County. His brucellosis was traced to him cleaning a feral hog in March 2009. He and his son butchered one of the many feral hogs they had shot or trapped. "People need to know that they should be cautious when they handle those pigs, and always wear gloves," he said. "I wouldn't want what's happened to me to happen to anybody." The man faces months of more treatment for the disease, which is caused by a bacterium linked to feral hogs. An estimated 2 million of the wild creatures roam Texas. The Houston Chronicle

reported Thursday [17 Sep 2009] that about 10 percent of Texas feral hogs test positive for brucellosis bacteria, but the rate in eastern parts of the state has been known to be higher. The disease can cause pregnant animals to prematurely abort their young. (Brucellosis is listed in Category B on the CDC list of Critical Biological Agents) *Non-suspect case

INTERNATIONAL DISEASE REPORTS

UNDIAGNOSED ILLNESS (INDIA): 25 Sep 2009, The deaths due to an unknown disease in Kandhamal district of Odisha increased to 10 on Wed 23 Oct 2009, with 2 more persons breathing their last at the MKCG Hospital at Berhampur. Although the 1st death took place at Gudrigaon village of Kandhamal 6 days ago, the authorities had not been able to conduct the necessary examination to know the cause of the deaths so far. Even as the state government had sent a medical team, the death toll was likely to rise, as 10 more persons were admitted to different hospitals. All the deaths had taken place in Gudrigaon village so far, though some people from a neighbouring village had been taken ill with similar symptoms. While some were of the view that deaths could be due to cerebral malaria, others were suspecting that the deaths were due to consumption of poisonous mushrooms. Meanwhile, a team of medical experts from the Regional Medical Research Centre in Bhubaneswar left for Kandhamal to inquire about the cause of the deaths, as they were suspecting that the deaths could have taken place due to some viral infection. (Emerging Infectious Diseases are listed in Category C on the CDC list of Critical Biological Agents) *Non-suspect case

UNDIAGNOSED DISEASE AND DEATHS, BOVINE (UK): 23 Sep 2009, Veterinary scientists are investigating a mystery disease, which is killing young cattle across Scotland. There have been 25 confirmed cases of bleeding calf Syndrome, which attacks animals less than one month old. Experts at the Scottish Agricultural College (SAC) said there had been an unexplained upsurge of the little-known but fatal disease. Affected calves can have a persistent fever and develop serious bleeding from orifices and internally. The cause of the illness is unknown but poisoning, genetic abnormalities, and drug reactions are being considered. The SAC scientists are working with colleagues at the Royal (Dick) Veterinary School and the Veterinary Laboratories Agency to discover what is behind the outbreak. In order to learn more they are offering a free of charge post-mortem service to farmers and vets who have suspected cases. Up to the end of August [2009] there were more than 25 confirmed cases from 18 farms in Scotland, with nearly 90 percent of these being seen in traditional beef herds. Cases have been seen in the south east and south west of the country as well as in Fife, Perthshire, and around Inverness and Aberdeen. In England and Wales a similar number of cases have been identified but these have been almost exclusively in dairy herds. (Emerging Infectious Diseases are listed in Category C on the CDC list of Critical Biological Agents) *Non-suspect case

CHIKUNGUNYA (GERMANY ex MALDIVES): 22 Sep 2009, Two travellers, a father (35 years of age) and his son (7 years of age) returning from a 10-day trip to the Maldive Islands presented on 14 September [2009], 4 days after their return, at the Department of Infectious Diseases and Tropical Medicine of the University of Munich with high fever, rash, and arthritis of small joints, mainly affecting fingers and wrists. Laboratory investigations showed leucocytopenia, mild hepatitis and normal thrombocyte counts in both patients. The wife of the traveller, also travelling with her husband and her son did not show any symptoms. Virological testing of blood samples for dengue and chikungunya virus by real-time-RT-PCR was positive for chikungunya and negative for dengue. Molecular characterization is ongoing. The travellers had direct flights from Germany to the Maldive Islands and vice-versa, and did not stay in chikungunya-endemic areas before or after this trip. To our knowledge these are the 1st reported chikungunya fever cases on the Maldive islands since January 2009 when an outbreak of chikungunya fever was presumed to occur on the Laamu Atoll. The results imply an ongoing transmission on the Maldives or a new introduction of chikungunya virus to the islands. Travellers should be advised to apply prophylactic measures such as protection from mosquito bites. (Emerging Infectious Diseases are listed in Category C on the CDC list of Critical Biological Agents) *Non-suspect case

SALMONELLOSIS, PAPAYA (Australia): 20 Sep 2009, The _Salmonella enterica_ serotype associated with this pawpaw (Papaya) outbreak in Western Australia is _Salmonella_ Saintpaul. A case series investigation found that 11 recent Western Australian _S._ Saintpaul cases reported eating pawpaw during their incubation period. As pawpaw is not frequently eaten (0 of 47 previously investigated _Salmonella_ cases, various serotypes, reported eating pawpaw), pawpaw sampling was conducted, and _S._ Saintpaul was detected on 3 of 6 whole pawpaws collected from a fruit market. At this stage contamination is linked to one grower, and pawpaw from this grower has been withdrawn. A previous _Salmonella_ Litchfield outbreak in 2006 in Western Australia was caused by contaminated pawpaw from the same growing region and in this previous outbreak dipping fruit in untreated river water to add fungicide was the likely cause of contamination. Environmental investigation has commenced to determine the source of contamination with this new outbreak. (Food Safety Threats are listed in Category B on the CDC list of Critical Biological Agents) *Non-suspect case

OTHER RESOURCES AND ARTICLES OF INTEREST

Bacterial Coinfections in Lung Tissue Specimens from Fatal Cases of 2009 Pandemic Influenza A (H1N1) --- United States, May--August 2009. September 29, 2009 / 58(Early Release);1-4. In previous influenza pandemics, studies of autopsy specimens have shown that most deaths attributed to influenza A virus infection occurred concurrently with bacterial pneumonia (1), but such evidence has been lacking for 2009 pandemic influenza A (H1N1). To help determine the role of bacterial coinfection in the current influenza pandemic, CDC examined postmortem lung specimens from patients with fatal cases of 2009 pandemic influenza A (H1N1) for bacterial causes of pneumonia. During May 1--August 20, 2009, medical examiners and local and state health departments submitted specimens to CDC from 77 U.S. patients with fatal cases of confirmed 2009 pandemic influenza A (H1N1). This report summarizes the demographic and clinical findings from these cases and the laboratory evaluation of the specimens. Evidence of concurrent bacterial infection was found in specimens from 22 (29%) of the 77 patients, including 10

caused by *Streptococcus pneumoniae* (pneumococcus). Duration of illness was available for 17 of the 22 patients; median duration was 6 days (range: 1--25 days). http://www.cdc.gov/mmWR/preview/mmwrhtml/mm58e0929a1.htm

Performance of Rapid Influenza Diagnostic Tests During Two School Outbreaks of 2009 Pandemic Influenza A (H1N1) Virus Infection --- Connecticut, 2009. MMWR September 25, 2009 / 58(37);1029-1032.

During May 2009, a few weeks after 2009 pandemic influenza A (H1N1) infection was first detected in the United States (1), outbreaks among students from two schools were detected in Greenwich, Connecticut. Staff members from Greenwich Hospital and the Connecticut Department of Public Health collected data on symptoms for 63 patients and submitted nasopharyngeal washings for testing using a rapid influenza diagnostic test (RIDT) for influenza A and B and real-time reverse transcription--polymerase chain reaction (rRT-PCR) assay, thereby affording an opportunity to assess the field performance of the RIDT. A total of 49 patients had infections with pandemic influenza A (H1N1) confirmed by rRT-PCR. This report summarizes the findings from this performance assessment, which indicated that, compared with rRT-PCR, the sensitivity of the RIDT for detecting infection in patients with 2009 pandemic influenza A (H1N1) was 47%, and the specificity was 86%. Sensitivity and specificity did not vary substantially by the presence or absence of CDC-defined influenza-like illness (ILI) or by time from symptom onset to specimen acquisition. http://www.cdc.gov/mmWR/preview/mmwrhtml/mm5837a1.htm

More information concerning Public Health and Emergency Preparedness can be found at the Office of Preparedness and Response website: http://preparedness.dhmh.maryland.gov/

Maryland's Resident Influenza Tracking System: www.tinyurl.com/flu-enroll

NOTE: This weekly review is a compilation of data from various surveillance systems, interpreted with a focus on a potential BT event. It is not meant to be inclusive of all epidemiology data available, nor is it meant to imply that every activity reported is a definitive BT event. International reports of outbreaks due to organisms on the CDC Critical Biological Agent list will also be reported. While not "secure", please handle this information in a professional manner. Please feel free to distribute within your organization, as you feel appropriate, to other professional staff involved in emergency preparedness and infection control.

For questions about the content of this review or if you have received this and do not wish to receive these weekly notices, please e-mail me. If you have information that is pertinent to this notification process, please send it to me to be included in the routine report.

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